UNCLASSIFIED

PROJECT PAPER
AMENDMENT

SAHEL REGIONAL
NIGER RIVER DEVELOPMENT PLANNING
(625-0915)

USAID/NIGER

AGENCY FOR INTERNATIONAL DEVELOPMENT

UNCLASSIFIED

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: C (A = Add, C = Change, D = Delete) — Amendment Number: 1 — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: Sahel - Regional Activities

3. PROJECT NUMBER: 625-0915

4. BUREAU/OFFICE: AFRICA/Office of Sahel and West African Affairs — 01

5. PROJECT TITLE (*maximum 40 characters*): Niger River Development Planning

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 12 DD 31 YY 85

7. ESTIMATED DATE OF OBLIGATION (*Under "B." below, enter 1, 2, 3, or 4*): A. Initial FY 77 — B. Quarter 4 — C. Final FY 84

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY 77 B. FX	C. L/C	D. Total	LIFE OF PROJECT E. FX	F. L/C	G. Total
AID Appropriated Total	1,130	220	1,350	1,630	220	1,850
(Grant)	(1,130)	(220)	(1,350)	(1,630)	(220)	(1,850)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country		354	354		484	484
Other Donor(s)	3,156	230	3,386	6,575	475	6,990
TOTALS	4,286	804	5,090	8,145	1,179	9,324

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	2. Loan	D. OBLIGATIONS TO DATE 1. Grant	2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	2. Loan	F. LIFE OF PROJECT 1. Grant	2. Loan
(1) SH	771	710		1,350		500		1,850	
(2)									
(3)									
(4)									
TOTALS				1,350		500		1,850	

10. SECONDARY TECHNICAL CODES (*maximum 6 codes of 3 positions each*)

11. SECONDARY PURPOSE CODE

12. SPECIAL CONCERNS CODES (*maximum 7 codes of 4 positions each*)

A. Code							
B. Amount							

13. PROJECT PURPOSE (*maximum 480 characters*)

The purpose of this project is to: (a) establish the analytical base (diagnostic study) and planning framework (action program) required for the preparation of the indicative basin plan and investment program; and (b) commence the process of strengthening the institutional capability of the Niger River Authority to carry out an effective program of planning and development for the Niger River Basin over time.

14. SCHEDULED EVALUATIONS: Interim MM 03 YY 83 — MM 07 YY 84 — Final MM 12 YY 85

15. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [X] 941 [X] Local [ ] Other (*Specify*)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (*This is page 1 of a _____ page PP Amendment.*)

Under this amendment, AID is enlisting the support of the U.S. Corps of Engineers to implement stage I of a river systems analysis program which will provide an essential tool for the development of the indicative basin plan and investment program referred to above.

17. APPROVED BY — Signature: Frederick E. Gilbert — Title: Director (Acting) Office of Sahel & West African Aff — Date Signed: MM 08 DD 06 YY 81

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM 07 DD 15 YY 81

AID 1330-4 (8-79)

ACTION MEMORANDUM FOR THE ACTING ASSISTANT ADMINISTRATOR FOR AFRICA

FROM: AAA/AFR/DR, John W. Koehring

SUBJECT: Sahel Regional, Niger River Development Planning (625-0915) Project Paper Amendment

I. Problem: Your approval is required to authorize reprogramming of five hundred and forty thousand dollars ($540,000) in unexpended project funds and an additional grant of five hundred thousand dollars ($500,000), all to be obligated in FY 81, from section 121 of the Foreign Assistance Act, Sahel Development Program Fund, to the Niger Basin Authority (NBA) for the subject project.

II. Discussion:

A. Project Description

The goal of this project is to assist the Niger Basin Authority to design and undertake a coordinated program for the development of the land, water and human resources of the Niger Basin for the benefit of the basin population. A large step toward this goal will be realized by (a) institutional support to the NBA and (b) the first stage of the Corps of Engineers (COE) river systems analysis program. AID is financing long-term technical assistance, participant training in the United States, support to the NBA so that personnel can participate in short term training/study tours and COE activities described in detail on pages 5 through 8 of the attached Project Paper (PP) Amendment.

The original project was authorized by the Assistant Administrator for Africa on July 5, 1977. It was designed as a part of a multi-donor effort to finance studies, advisory assistance, training and institutional support to the Niger River Commission. The Commission experienced considerable difficulties and the conditions precedent to disbursement of project funds have only recently been met. The Niger Basin Authority (NBA), the new name for the Commission, is now under new management and is presently undergoing a revitalization program. Circumstances have changed considerably since the project was authorized. During the interim, a new technology, a river systems analysis model, has been developed and presents itself as a useful tool for understanding the dynamics of the fluvial system. The NBA, USAID/Niger and AID/W river basin advisors all agree that a river systems analysis capability is the most appropriate assistance that AID can provide the NBA at this time. With many development projects involving the Niger River in the planning stages, a river systems analysis capability is urgently needed in order to be able to assess up-stream and down-stream implications of these projects. Such a capability does not yet exist and the impacts of individual projects on the basin can not be properly analyzed. Undertaking a river system analysis at this juncture is timely and represents a logical step in the institutional development of the NBA.

The first stage of the COE work will cost $1,040,000. It is proposed under this amendment that $540,000, which represents the Diagnostic Studies line item, be reprogrammed to finance roughly half of the COE first stage

effort. The other half of the financing ($500,000) will be provided from funds newly authorized under this Amendment.

The Diagnostic Studies envisioned under the original project, and deleted from the Project under this Amendment, were to be carried out in the context of a multi-donor effort. The FAC and UNDP have undertaken various components of these studies, but CIDA took a position similar to AID and did not proceed with the activities it originally proposed. Consequently, the studies and their respective terms of reference, as set forth in the original Project Paper, will be updated during discussions at a donors' pledging conference to be held in October 1981. At that time, the donor community will resume collaboration to fund portions of essential Diagnostic Studies not yet completed.

Failure to fund the COE river systems analysis program would leave NBA in its present position of not being able to judge the impact on the Niger River of development interventions proposed by member states. The COE program will provide a tool, owned and operated by all member states through the NBA, that can generate concrete data regarding possible detrimental effects of proposed interventions.

The Niger Basin Development Planning Project, as it is described under this Amendment, represents an essential portion of the NBA's two year development plan. The FY 83 Regional Development Strategy Statement for the Sahel embraces AID's involvement of this kind in river basin development.

The ultimate beneficiaries of the project are the rural poor who live in the Niger River Basin who are estimated to number more than 40,000,000.

B. Financial Summary

The additional AID financing under this Amendment totals $500,000, all of which will be disbursed in foreign exchange. In accordance with AID's OYB and allotment procedures, the total amount will be obligated in FY 81. The following presents by line item the LOP funding before this Amendment, the increase under this Amendment, the new total LOP, the NBA/member state contributions and donor contributions ($000):

	Previous LOP	Increase this Amendment	New Total LOP
Diagnostic Studies	540	500	1,040
Institutional Development	810	0	810
TOTAL	1,350	500	1,850
NBA/Member State Contributions	354	130	484
Other Donor Contributions	5,090	1,900	6,990
GRAND TOTAL	6,794	2,530	9,324

Although the 25% host organization contribution required under Section 110(a) of the Foreign Assistance Act is inapplicable to projects funded under the Sahel Development Program, the NBA/Member State contribution to this

project, if amended, is estimated to be $484,000 or 26% of AID's amended total LOP funding of $1,850,000.

C. Socio-economic, Technical, and Environmental Description:

The social analysis on pages 14-15 of the PP Amendment indicates that, although the activities to be financed under this project are data gathering, utilization of the data will be oriented to the needs of the population residing in the Niger River Basin, who will be directly affected by the types of structures ultimately proposed for development. The economic feasibility of this activity remains as determined in the original PP and revalidated on page 16 of this Amendment. There are no human rights implications with regard to the Niger Basin Authority.

The technical analysis on pages 12-13 concludes that the first stage of the COE program is a technically feasible undertaking which is required for development of an acceptable plan to develop the resources of the Basin.

The IEE contains a negative determination. No future environmental analyses are required under this Phase I project.

D. Project Implementation

This Amendment does not request any waivers and there are no conditions precedent or covenants pertaining to this amendment. The implementation plan contained in the COE proposal, as amended, and summarized in the attached PP Amendment, has been carefully reviewed by the Project Committee, which believes the plan is realistic and establishes a reasonable time frame for carrying out the project under the Amendment.

E. Section 611(a) and (b)

The requirements of Section 611(a) of the FAA have been satisfactorily met. The costs and plans for Phase I have been thoroughly reviewed and verified. Section 611(b) is not required for this project since its nature is data gathering.

F. The Project Review was chaired by AFR/DR/SWAP, Jonathan McCabe, on August 7, 1981. The Review concluded that there are no outstanding issues and recommended the PP Amendment be taken forward to the ECPR, which was held August 19, 1981. The ECPR, which was chaired by AAA/AFR/DR, John W. Koehring, also concluded that no outstanding issues exist and recommended that the PP Amendment be taken forward for signature.

G. Responsible Project Officers

Michael G. Huffman, Project Officer, AFR/DR/SWAP
Myron Golden, Program Officer, USAID/Niger

III. Justification to the Congress

A Congressional Notification has been prepared and was forwarded to Congress on September 3, 1981 advising of the necessary increase in LOP funding; the waiting period will expire COB September 17, 1981.

IV. Recommendation: That you sign the attached Project Authorization Amendment and thereby approve the reprogramming of $540,000 of project funds and an increase to the authorized amount of the grant funding by $500,000 from $1,350,000 to $1,850,000.

Attachments: As stated

Clearances:

AFR/DP:ICoker (draft)
AFR/DR/SWAP:JRMcCabe (draft)
AFR/DR/ARD:CScherrer (draft)
AFR/SWA/SRD:DMaxwell (draft)
AFR/SWA:FGilbert (draft)
AFR/DR:NCohen
AFR/DR/ENGR:MGould (draft)
GC/AFR:LDeSoto (draft)

Drafted by:AFR/DR/SWAP:MGHuffman:fn:9/4/81

PROJECT AUTHORIZATION

Name of Entity : Niger Basin Authority

Name of Project : Niger River Development Planning

Number of Project: 625-0915

1. Pursuant to Section 106 of the Foreign Assistance Act of 1961, as amended, the Niger River Development Planning Project was authorized on July 5, 1977. That authorization is hereby amended as follows:

a. Pursuant to Section 121 of the Foreign Assistance Act, as amended, I hereby authorize $500,000 in additional grant funds. This will increase authorized life of project funding from $1,350,000 to $1,850,000.

2. The authorization cited above remains in force except as hereby amended.

Date: 9/4/81

Irvin Coker
Acting Assistant Administrator
for Africa

Clearances: As indicated on Action Memorandum

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PROJECT PAPER AMENDMENT

Sahel Regional Niger River Development Planning Project
(625-0915)

I. Recommendation

It is recommended that $540,000 in undisbursed funds remaining from the $1,350,000 life-of project funding be reprogrammed and joined by $500,000 of newly authorized funds to finance the first stage of a river systems analysis program to be carried out by the U.S. Corps of Engineers (COE) ($540,000 + $500,000 = $1,040,000).

II. Rationale for Project Amendment

The original project was authorized by the Assistant Administrator for Africa on July 5, 1977. It was designed as a part of a multi-donor effort to finance studies, advisory assistance, training and institutional support to the River Niger Commission. The Commission experienced considerable difficulties and the conditions precedent to disbursment of project funds have only recently been met. The Niger Basin Authority (NBA), the new name for the Commission, is now under new management and is presently undergoing a revitalization program. Circumstances have changed considerably since the project was authorized. During the interim, a new technology, a river systems analysis model has been developed and presents itself as a useful tool for understanding the dynamics of the fluvial system. The NBA, USAID/Niger and AID/W river basin advisors all agree that a river systems analysis capability is the most appropriate assistance that AID can provide the NBA at this time. With many development projects involving the Niger River in the planning stages, a river systems analysis capability is urgently needed in order to be able to assess up-stream and down-stream implications of these projects. Such a capability does not yet exist and the impacts of individual projects on the basin can not be properly analyzed. Undertaking a river system analysis at this juncture is timely and represents a logical step in the institutional development of the NBA.

The NBA summaries its justification for the river systems analysis by saying:

> The dynamic character of a drainage system of the type constituted by the River Niger, its tributaries and sub-tributaries requires that any development of regional or national character should be envisaged in the context of the whole system. Indeed, engineering and economic/financial return studies, as well as projections of all types, carried out before the construction of works, whatever their size, must take into account this dynamic character to be realistic. To operate without taking into account, in particular the sedimentation process will lead, in the long run, to costly difficulties in the conception, analysis, operation and maintenance of the works.
>
> The construction of a mathematical model at the level of the whole Niger Basin constitutes the necessary preliminary step to the utilization of the basin waters for the construction of hydro-electric or multi-purpose works.

The Diagnostic Studies envisioned under the original project were to be carried out in the context of a multi-donor effort. The FAC and UNDP have undertaken various components of these studies, but CIDA took a position similar to AID and did not proceed with the activities it originally proposed. Consequently, the studies and their respective terms of reference, as set forth in the Project Paper, will be updated during discussions to be held at donors' conferences in July and October, 1981. At that time, the donor community will resume collaboration to fund portions of essential Diagnostic studies not yet completed.

III. Summary of Original Project

The Niger River Development Project was initiated by a grant of $1,350,000 from AID to the River Niger Commission in July, 1977. The project was designed as an interim "start-up" phase of a long-term, multi-donor assistance effort to support the institutional development of the River Niger Commission (RNC) and the preparation of a plan and investment program for the comprehensive development of the water, land and human resources of the Niger River Basin. The project was to be a multi-donor activity which, in the interim phase, was to involve the close coordination of donor contributions from the United States (AID), Canada (CIDA), France (FAC) and the United Nations (UNDP).

The River Niger Commission (RNC) (as it was then called), was a regional organization of nine West African countries within whose boundaries the Niger River, its major tributaries and drainage basin are located. The functions include, among others, the coordination of basin related development efforts among the member states to assure the most effective use of basin resources and the design and preparation of long-term development plans through the execution of general and project-specific studies.

Following a request to the international donor community by the RNC for assistance in the elaboration of a comprehensive "Indicative Plan" for basin development and the related development of the technical capability of the RNC Executive Secretariat, the United States, Canada, France and the United Nations responded by indicating their interest in participating in a 5-year program of data generation, study and pilot-project experimentation. The program was to culminate with the preparation of a comprhensive basin development plan and investment program. A major effort would also be made to strengthen the RNC to enable it to effectively mobilize resources and coordinate execution of the plan.

Given the general lack of basic data for the elaboration of the detailed terms of reference for such a long-term "Action Program," the RNC and donors decided to initiate this long-term project on a phased basis.

The first phase, or "start-up" project, as presented in the original Project Paper, was designed to produce the required information to precisely elaborate the long-term "Action Program" and associated costs, as well as take the first steps in strengthening the institutional capability of the RNC's Executive Secretariat. The specific objectives were to:

(1) Gather and analyze available information on all aspects of the Niger River Basin through a comprehensive Diagnostic Study, and, on the basis of this analysis, delineate the terms of reference and budgetary requirements for the second phase "Action Program";

(2) provide the initial expatriate technical advisory assistance required for the RNC Executive Secretariat to carry out the "Action Program" and provide advice, guidance and on-the-job training to the idigenous staff of the RNC;

(3) initiate short and long-term academic training for member state nationals on the permanent staff of the RNC; and

(4) provide technical equipment, logistics support and architectural designs for the physical plant of the RNC required for efficient execution of the "Action Program."

Although each donor was to be responsible for the execution of its individual inputs, the UNDP was to assume responsibility for overall coordination and direction.

The Diagnostisc Study was to include surveys in the following areas:

Agriculture (AID)
Water Resources (CIDA, FAC)
Engineering (CIDA, FAC)
Topography, Mapping and Remote Sensing (AID, FAC)
Education and Training (AID)
Environmental/Health (AID, CIDA, UNDP)
Social Survey Research (AID)
Legal and Institutional (UNDP)
Integration of Study Components and Preparation of Diagnostic Study, Atlas and "Action Program" Reports (UNDP)

The expatriate advisory staff was to include the following technicians assigned to the RNC on long-term contracts:

Senior Advisor Coordinator (UNDP)
Water Resources Planner (AID)
Regional Economist (CIDA)
Hydrologist (CIDA)
Civil Engineer (FAC)
Agriculturist (FAC)
Soil Scientist (AID)
Forecasting Hydrologist (UNDP)

The AID contribution was to additionally fund (1) long-term, academic participant training (in conjunction with CIDA) for the initially identified technical staff requirements of the RNC Executive Secretariat, (2) short-term observational tours of river basin development projects in the U.S., (3) short-term, third

country training for documentalists of the RNC's documentation center, (4) contract services with a local or third country architectural design firm for the preparation of plans for the physical plant requirements of the RNC Executive Secretariat, (5) consulting services to determine the feasibility of establishing in the RNC a social and economic survey research unit, and (6) logistical support to the RNC.

The end result of this interim project was to be the elaboration of a five-year "Action Program" which would provide the detailed basis for a long-term, multi-national support to the RNC; the existence of an expatriate staff capable of assisting the RNC in the implementation of the "Action Program" and completion of initial efforts to strengthen the technical and managerial capability of the RNC to enable it to assume major responsibility for the execution of the "Action Program".

The preceding describes the project as designed and authorized in 1977. A Grant Agreement in the amount of $1.35 million was signed with the River Niger Commission in August 1977. Two conditions precedent to disbursement of AID funds were included: (a) the RNC member states were required to contribute annual dues to the RNC to provide an adequate budget to hire staff and ensure funding availability to cover counterpart contributions and (b) agreements for the implementation of the start-up phase were to be signed and executed between the RNC and other participating donors. The Commission experienced considerable start-up difficulties and the Conditions Precedent have only recently been met. Consequently, the AID part of the program has not progressed very far to date.

CIDA has experienced similar delays and has never actually obligated funds for this project.

IV. Summary of the New Activities to be Finance Under the Amended Project

The Amended Project will continue to implement on-going activities under the institutional support rubric (i.e., long-term technical assistance, long-term participant training, short-term training/study tours, logistical and budgetary support to the NBA). However, instead of undertaking the various surveys and components of surveys for which AID funding was originally authorized, it is proposed that the first stage of the U.S. Corps of Engineers proposal be under taken.

The first stage will consist of assembling existing river data into an easily accessible data storage and retrieval system, performing a geomorphic analysis and determining future data needs. The second stage is not proposed for funding at this time and will be designed as Phase II project. The second stage will consist of utilizing existing COE computer programs to develop and apply a water-sediment routing model to the Niger River and determine the engineering feasibililty and cost of structural features to provide navigation on the Niger River.

FIRST STAGE EFFORT

Reconnaissance of the Niger River and its tributaries (excluding the Benue River and the Niger River delta) by air will be conducted at the earliest possible time in order to familiarize COE representatives with the basin. At least three COE technical personnel will take part in this reconnaissance. Areas, where additional cross-section data are required and those locations where suspended and bed load sediment samples will be taken, will be identified. This effort is essential to all aspects of the geomorphic analysis and adaptation and utilization of the water-sediment routing model.

Basic historic data will be assembled for inclusion in an interactive data storage and retrieval system. These are the primary climatological, hydrological, geometric, and geomorphic data required for day-to-day analyses of hyrdololgy, hydraulics and associated basin development.

This data will be interfaced during the second stage effort with the mathematical model for study of alternatives for basin development. This will require converting existing data in unpublished tabulated form in Guinea and Nigeria into an acceptable form for computer input. Completion of data assembly within the time and cost estimates will depend on securing data on other countries in the watershed from the French Office de la Recherche Scientifique et Technique Outre-Mer (ORSTROM) and conversion of the data into a form for computer input.

The data storage and retrieval system will have the following characteristics:

1. Identification of all data by date, time, type and location for easy access by a compatible computer system;

2. accessibililty of all or any part of the data base; and

3. provisions for data in a variety of formats including tabular, graphical, and best-fit numerical relations.

The systems will be designed and implemented to accept all pertinent historic data and to allow inclusion of new data, as required. The system will also be expandable for future inclusion of economic, water quality or other data for the analysis and development of the basin. In addition, the system will allow inclusion of synthesized, 50-year sequences of flows and sediment discharge which will be developed in the second stage.

Sensitivity analysis will be performed utilizing an existing, physical process oriented, water-sediment routing model that has been verified, tested and utilized in large scale systems analysis. This sensitivity analysis will be used to identify the relative importance of historic data and short-term data collection essential to completion of the proposed studies.

A geomorphic analysis of the Niger River Basin will be carried out utilizing hydraulic, hydrologic, and geomorphic principles supported by field reconnaissance and existing aerial photos, maps and data. The data will be analyzed and classified; on this basis, the river will be subdivided into homogenous reaches. Factors to be considered in this analysis are as follows:

Type of River (meandering, braided)
Bed Material (rock, cobbles, gravel, sand)
Geologic Controls
Existing Water Resources Projects
Existing Land Use
Swamp, Estuarine, and Deltate Areas
Precipitation Patterns
Winds
Elevation
Temperature
Vegetation
Geology
Soils

In conjunction with the geomorphic analysis, maps and overlays will be developed that show the following:

General Plan View
Profiles
Location of Data Stations
Zones of Aggradation
Zones of Degradation
Channel Stability
Nature Controls
Existing Navigability
Existing and possible future dredged material disposal locations

The geomorphic analysis will provide the basic understanding of the river system which is necessary in developing the second stage math model and in evaluating the model results.

A sediment data program will be designed considering the indentified data needs, logistics and existing programs. This program design will specify station locations and the type of frequency of measurement as well as define methodology and equipment needs for field and laboratory work. Emphasis will be placed on developing a data collection system which utilizes existing steam data collecting organizations, personnel and equipment. Any coordination, additional equipment, personnel training and supplementary data collection will be provided by the COE.

Upon completion of the first stage effort, a report will be prepared (1) presenting the results of the geomorphic analysis, including the maps and overlays described above; (2) identifying specific future data needs and (3) explaining the sediment data collection program.

Transfer of Technology

For the acquisition of sediment data, the COE will provide equipment and personnel to train in-country discharge parties, in collaboration with NBA personnel to acquire such samples and will monitor the acquisition of such data for one year to insure quality control.

Corps of Engineers contract efforts in any of the NBA member states will provide for a minimum of 20% participation of technicians or engineers from member states and/or NBA personnel. These individuals will be high level technicians or qualified engineers.

Training during the first stage will be provided for two individuals to provide for technology transfer. These individuals will be selected from a list to be provided by NBA. In order for training to be most effective, these individuals should speak English.

One individual will be trained in development and application of the data storage and retrieval system for a period of about six months. Three months of this time will be "hands on" training during data collection in the member states. The remaining time will be with the Corps or its contractors in the United States during development of the storage and retrevial system. This individual must have a B.S. or equivalent educational background in computer science, engineering, physical science, or mathematics.

The other individuals will receive training in geomorphic analysis of the river system. This training will include about two months with the Corps or its contractors during reconnaissance of the river basin and four months in the United States while the geomorphology portion of the first stage report is being developed. The individual must have a B.S. or equivalent educational background in engineering or geology.

These individuals will not be paid by the Corps or its contractors. Substantial additional training and technology transfer will be accomplished as a part of second stage of the basic proposal. Details concerning this training will be included in the proposed amendment for second stage effort.

Results: Results expected from the first stage effort are summarized below:

1. An interactive data storage and retrieval system containing all of the data assembled as described above;

2. documentation for the data storage and retrieval system describing how the data can be assessed;

3. an overall description of the geomorphology of the Niger River system;

4. a plan for sediment and other data collection;

5. an analysis of data gaps and future data needs; and

6. a report summarizing the first stage studies.

Critical Point

During first stage a critical point in time will be established for the purpose of determining whether to proceed with the design of a Phase II project which will incorporate the second stage of the Corps of Engineers proposal.

Summary of First-Stage Activities

1. Conduct aerial reconnaissance of Niger River
2. Describe geomorphology of Niger River system
3. Establish data storage and retrieval system
4. Provide in-service training of nationals on data collection
5. Start to establish river systems analysis capacity within the NBA

SECOND STAGE EFFORT
(not included in this project)

While it is not proposed to undertake the second stage at this time, pending the design of a Phase II project which will include the second stage of COE proposal, the second stage effort is described below.

Summary of Second-Stage Activities

1. Develop and apply a water sediment routing model
2. Gather supplemental geomorphic and hydrological data
3. Study alternatives for basin development
4. Determine feasibility and cost of improving the Niger River's navigability
5. Prepare a scope of work and cost estimates for extending the model's coverage into the Benue River and delta regions.

The full utility of data gathered in the first stage will only materialize in the development of a water-sediment routing model during the second stage.

It appears that existing hydrographic data on the main stem of the Niger is not sufficient to support the proposed model and navigation studies. Therefore, in the second stage, existing data will be supplemented by field surveys that will

The feasibility of accomplishing three alternative levels of navigability will be evaluated. The three alternatives have been tentatively established as follows:

1. A minimum improvement plan for developing and maintaining 2-meter navigation depth through presently navigable reaches in Niger;

2. a plan to develop 2-meter navigation depth from the coast to Kouroussa, Guinea; and

3. a plan to develop 3-meter navigation depth from the coast to Kouroussa.

Selection of the optimum plan for each of these alternatives will involve evaluating a number of specific plans with various features including combinations of dredging, channel stabilization and contraction works; high lift and low lift locks and dams on the main stem and regulating dams on the tributaries. The size of vessel and duration of navigability will also be selected for further consideration. A conceptual design of specific features of these plans will be carried out and used for preparing cost estimates which will identify the most cost effective plan for developing each alternative level of navigability.

Three additional water resources development alternatives, to be agreeed upon by the Niger Basin Authority and Corps of Engineers at least 18 months before the scheduled completion date, will be evaluated. These alternatives may involve, but are not limited to, modified operation of navigation alternatives to meet other objectives such as irrigation and hydropower or evaluation of reforestation of the watershed. The analysis will be limited to a single model run for each alternative.

It is expected that the combination of first and second stage efforts will develop an analysis of transportation by water for the main stem Niger River and a water-sediment model with the capabililty of analyzing the effects on Niger River as a result of changes in various parameters or man-made constraints on the river.

Second stage work will provide the following:

1. Suspended and bed load sediment data for one year at about 50 stations;

2. river cross sections and other geometric data necessary to fill data gaps;

3. a water sediment model for the main stem of the Niger River and documentation explaining how the model can be used;

4. cost estimates for engineering works and operation and maintenance required to provide navigation on the Niger (Three alternative levels of navigability will be evaluated);

5. an evaluation of the effects on the main stem Niger for three additional water use alternatives (to be agreed upon by the sponsor and the Corps of Engineers) using the water sediment model; and

6. a final report.

utilize boats, sonic fathometers, electronic positioning equipment and existing aerial photos, gaging stations and topographic maps. Profiles and cross-section data obtained by sonic equipment will be tied to existing vertical control. Where adequate vertical control does not exist, the water surface profile, estimated from gage readings, will be used to establish elevation. Cross sections from water's edge to water's edge will be taken during intermediate to high stages at a spacing not to exceed 10 kilometers.

A one-year sediment data collection program will be conducted following the program design established in the first stage. Approximately 10 suspended sediment samples will be procured at each gaging station. These samples will be taken at the same time as water discharge measurements, four will be collected during the period of annual flooding, three during intermediate discharges, and three during low flow. Bed load samples will be taken at each station and grain size distribution determined. Calculation of the bed load will be made and added to the suspended sediment load measurements. From these data, sediment discharge relations will be established that tentatively define sediment discharge by size fraction.

A water-sediment routing model will be developed which will have the following characteristics:

1. The model will interface with and utilize the interactive data storage and retrieval system;

2. will be applicable to the Niger River and its major tributaries;

3. will be based on physical processes and supplemented with experimental and statistical relations as required;

4. will be capable of routing sediment by size in order to properly evaluate general scour and fill, aggradation, degradation and armouring;

5. will be capable of simulating the effects of changes in land use and of structural features associated with navigation, irrigation, hydropower, flood control and other projects;

6. will provide a fundamental tool for short and long-range analysis of the development of various alternatives (Input from the tributaries will be treated as point sources); and

7. will utilize existing computer programs with minor modifications, as necessary, and will reside in a U.S.-based computer system.

The model will start at Onitsha, Nigeria, above the tidal and salinity influence and extend to Kouroussa, Guinea. The Niger River Delta and the Benue River will not be included because of cost and time considerations. A scope of work and cost estimates will be prepared during the second stage of the COE analysis to give an indication of the level of effort required to extend the coverage of the model into these areas. This information could lead to the design of Phase III project for the modeling of the delta and the Benue. Through mutual agreement with Nigeria, the model's coverage could be extended under a Phase III project.

Twenty copies of the final report for this work effort will be submitted to the Niger Basin Authority. A draft of this report will be circulated for review three months before the final document is to be delivered. The report will include the following:

1. A description of the work effort accomplished;

2. a geomorphic analysis of the Niger River;

3. a description of the water sediment model for the Niger River main stem and of the data storage and retrieval system and user's manual for the component programs of the model;

4. a description of the results for three alternative levels of navigation for the Niger River and for three additional water resources alternatives;

5. cost estimates for three alternative levels of navigation, a description of the type and location of engineering works required for such navigation, and of the annual operations and maintenance requirements; and

6. format and procedure for the transfer of the technology developed as a part of this work effort to the Niger Basin Authority.

It should be noted that while the water sediment model will be an invaluable tool to the NBA, it is only one tool of many that are required to make prudent development decisions. The model, by itself, may not be used to identify project alternatives. Economic, sociological and environmental studies are good examples of what must be undertaken in conjunction with the model development. AID intends to emphasize this at the October, 1981 Donors' Conference. AID plans to conduct through the NBA under our Phase II Project, an environmental study for the Kandaji Dam. Other donors will be encouraged to join AID in financing these types of necessary studies.

TECHNICAL/ENGINEERING ANALYSIS

The first stage of the COE effort consists basically of the collection of data and the assembly of this data into an accessible data storage and retrieval system, performing a geomophic analysis and determining future data needs. The data gathered under the first stage will be utilized in the development of the second stage water/sediment routing model for the Niger River. This mathematical model will provide a basic planning tool that can be utilized in simulating the effects of changes in land use and of navigation, irrigation, hydropower, flood control and other projects considered for construction in the Niger River Basin.

The data to be collected and assembled under the first stage includes primarily climatological, hydraulic, hydrologic, geometric and geomorphic information which is required for the calibration of the model and for future simulation analyses to be performed under the second stage. More specifically, data requirements include:

1) Stage - Discharge records
2) Precipitation Records
3) Topographic Information - river cross-sections
4) Sedimentation Data - suspended sediment and bed material gradation
5) Soil Maps
6) Topographic Maps
7) Aerial Photographs
8) Reservoir Information - area-capacity/curves
9) Structural Information including location of existing and proposed structure, design data and operational procedures and records.

The availability of existing data has been assessed by the COE during the period of formulation of their proposal for the river systems analysis. Existing data sources include OSTROM which has hydrologic, soils, topographic and photographic data available and the Governments of Guinea, Niger, and Nigeria which have stage-discharge, soils and additional topographic data. Very little sediment data is available and this necessitates the second stage sediment data collection program. Data gaps and additional data acquisition needs will be identified under the first stage program and the additional data to which the model is sensitive will be collected under the second stage.

An existing water/sediment routing model will be utilized in the development of the Niger River Model. Several models, at least four, are available for use however, the exact model will not be identified until the second stage since the model development work will be contracted out. Models of the type to be utilized for the Niger River are not a new development, but have been used successfully in the type of study envisioned, both domestically and abroad. The Corps of Engineers has had considerable experience in river basin modeling and is fully and uniquely qualified to assist the NBA in their efforts in developing this means of assessing the impacts of water resources development on the Niger River Basin.

Social Analysis

This amendment to the Niger River Development project provides for the first stage of the COE river systems analysis program, or namely:

1. Collection of data on the fluvial dynamics of the Niger River;

2. assembling of this data into an accessible data storage and retrieval system;

3. performance of a geomorphic analysis; and

4. determination of what other technical and physical data are necessary in the planning for the development of the basin.

The full utility of the data gathered in the first stage will only materialize in the second stage, during which a water-sediment routing model will be developed.

The physical data gathered in the first phase must be augmented by other physical and technical data to be collected during the second stage. Before any planning is done to put structures on the river, the engineering data must be evaluated in the context of environmental, social and economic data. Although the engineering data will strengthen the planning ability of the Niger Basin Authority, this data alone cannot be evaluated and used for development planning unless supported by the other types of data mentioned previously. The main beneficiary of the project will be the NBA. Through a more thorough understanding of the River Basin and the people who live there, the NBA can make better decisions which enrich the lives of more people in the Basin.

During meetings in July and October 1981, the donors will discuss what other diagnostic surveys and studies are necessary for planning the development of the basin. These studies will then be funded by the various donors.

Care must be taken to consider all aspects of the situation during the planning phases. The millions of residents in the Basin are totally dependent on the river for their livelihood. Agriculture is by far the most important activity within the Basin.

The land and water-use systems of the basin which utilize a wide range of strategies to exploit the full range of available resources, are not only complex, but they are also intricately interrelated. The Peul are encouraged to graze the stubble left in the fields after the cereal harvest so that the farmers can benefit from whatever manure is deposited. When farmers build up their herds, the Peul often serve as herdsmen. As the dry season progresses and the Niger flood recedes, the Peul drive their cattle into the swamps that border the river or cross river channels to feed on the grass that provides ample grazing during most years. Agricultural systems are complex, with guinea corn, millet, legumes and a variety of other crops interplanted in the upland areas during the rains. Rice, on the other hand, is cultivated in wet spots closer to the river.

Some farmers in the river basin double crop annually. The first crop, namely maize and early maturing varieties of millet, are planted near the river at the start of the rains. After the harvest of these crops, onion seedlings are transplanted into the irrigated areas after the flood waters arrive. Though onions are the main cash crop, other vegetables are grown. Subsidiary activities include fishing; however, there are also full-time professional fishermen who travel up and down the course of the river to fish.

The complex ethnic organization and farming systems in the Basin are the product of a lengthy evolution during which a mosaic of peoples and cultures have worked out a complex and interrelated set of life styles. All these farming systems are irrevocably dependent on the water and soil which are deposited each year by the flooding river. The farming systems have fruitfully used the land adjacent to the river for centuries without causing permanent environmental damage.

Therefore, some thought should be given to enhancing these traditional systems rather than changing to a more formal capital intensive system. This is especially true considering a recent report by the FAO which indicates that at least fifty percent of the intensive irrigated land in the world is saline, with several hundreds of thousands of hectares going out of cultivation each year because of salinity alone.

Because approximately sixty-five percent of the flood waters of the Niger are "lost" in the interior delta, some planners will attempt to "capture" some of this for other uses through construction of regulatory dams like the Kainji Dam in Nigeria and through channelization and other mechanisms to improve transportation on the river in the interior delta itself. Unless the needs of the existing populations who use the basin are considered, the results could be catastrophic.

Although the collection of physical data concerning the river, which is the object of this project amendment, has no social significance in itself, the utilization of the data is a social concern.

Without thoughtful planning, many of the farmers, herdsmen, and fishermen may be harmed by the structures built on the river.

In order to formulate plans which are in the best interest of the Basin's inhabitants, economic, social and environmental data should be used in conjunction with engineering data. This set of data base should be comprehensive enough to fully capture the entire gamut of physical, environmental, and socio-economic characteristics underlying the utilization of the entire length of the river.

Economic Analysis

The economic justification for the Institutional Development component of this project remains as presented in the original Project Paper. The new activity to be funded under this Amendment, the Corps of Engineers (COE) study is designed to provide essential information necessary to evaluate the physical impact of various development schemes. Without such a tool, the complex interrelationships that make up the Niger River system can not be fully understood. Understanding the physical characteristics of the river and their interaction is not a tangible product which is conducive to evaluation in conventional market value terms. Thus, the cost effectiveness approach is adapted according to AID Handbook 3.

Alternative Number 1

Require all development projects that are planned along the Niver River to determine the impact of the planned activity on the entire river system.

Evaluation of Alternative Number 1

This alternative is clearly not cost effective. Even if the nine member states could agree to such a requirement, the high degree of duplication of effort would make this alternative cost prohibitive.

Alternative Number 2

Do not fund the COE study. Allow development projects to be implemented without taking into account their impact on the entire river system.

Evaluation of Alternative Number 2

Although it is impossible to predict how many, if any, detrimental development projects would be implemented if the tool of a river system's model were not available, it is clear that the chances of blocking such projects is lower without the tool. Many of the projects that are planned tend to be the types that involve a high degree of national pride (e.g., dams and irrigation schemes) and are, therefore, difficult to halt especially by neighboring counties. The existence of a tool, owned and operated by all member states through the Niger Basin Authority (NBA), that can generate concrete data regarding possible detrimental affects, would be invaluable. Without such a tool, the basin's resources might be wasted. The Niger River is believed to be a relatively fragile river system. There is some indication that the Niger, at some time in the past, flowed, not into the Gulf of Guinea, but into the Atlantic Ocean. Some unexplained geological event changed the river's direction to its present path. Unchecked rapid exploitation of the river's resources without taking into account the impact upon the entire system could lead to altering the Niger from what we know it as today at an expense to the member states that defies computation.

Revised Financial Plan

The revised financial plan is based on estimates of the cost of the proposed activities presented in the COE proposal, as amended, and outlined under section IV above (Summary of Activities to be Financed Under the Supplemental Funding--First Stage Effort only).

The following presents by line item the LOP funding before this Amendment, the increase under this Amendment, the new total LOP, the NBA/member state contributions and other donor contributions ($000):

	Previous LOP	Increase this Amendment	New Total LOP
Diagnostic Studies	540	500	1,040
Institutional Development	810	-0-	810
TOTAL	1,350	500	1,850
NBA/Member State Contributions	354	130	484
Other Donor Contributions	5,090	1,900	6,990
GRAND TOTAL	6,794	2,530	9,324

Environmental Analysis

Amendment to

Initial Environmental Examination

Project Location:	Sahel Regional
Project Title:	Niger River Development Planning (625-0915)
Funding for FY 81:	$500,000
Life of Project:	The Project Assistance Completion Date is 3/31/83
IEE Amendment Prepared by	Michael Huffman Sahel West African Projects Division Michael G. Huffman
Environmental Action Recommended:	Negative Determination Concurrence

Frederick E. Gilbert
Frederick E. Gilbert
Acting Director
Office of Sahel and
West African Affairs

Bureau Environmental Officer's Decision

Approved J. Hester rm 8/28

Disapproved _____

Date 8/28/81

Clearance GC/AFR: [signature]

There will be no environmental impact directly associated with the historical data gathering and technical analysis to be undertaken under the first stage of the COE river systems analysis program. The NBA should fully understand that environmental, as well as other studies, will need to be completed, in conjunction with the COE program, as part of the planning process for developing of the Niger River Basin. AID will continue to stress this point with the NBA and other donors. AID plans to bring this point up at the October, 1981 donors' pledging conference.

The Phase II Project, which will include the second stage of the COE program and an environmental study for the Kandaji dam, will set forth in its Project Paper a more thorough Environmental Analysis because the second stage of the COE program goes beyond simple historical data collection.

Administrative Feasibility

General

Participating organizations in the first stage of the COE program are the following:

— Niger Basin Authority

— AID

— U.S. Corps of Engineers

— Hydrological Service Organizations of the Nine Member States:

Benin; Cameroon; Chad, Guinea; Ivory Coast; Mali; Niger; Nigeria; and Upper Volta

Responsibilities of the Participating Organizations

A. Niger Basin Authority (NBA)

The NBA will expedite the acquisition of data and facilitate the movement of personnel and equipment inside the member nations and between nations. This support includes the following activities:

1. NBA will serve as liaison between COE (and its contractors) and member states and organizations with which contact will be required;

2. assistance in acquisition of visas, work permits, documents necessary for transfer of equipment, or other entry rights to member nations will be provided for COE personnel and COE contrctors;

3. provision of office space, typing, copying, local transportation support and telex services to the COE. Provision of other required administrative support for the first stage work effort;

4. assistance with the transfer of equipment into and between member nations without import duties will be provided. Assistance in expediting shipment of sediment samples from point of collection to Niamey will be provided;

5. NBA will negotiate with the hydraulic data collection organizations of the member nations to assure that these organizations will assist in sediment data collection. Data collection assistance will include field party labor and equipment at no cost to COE. Specific sediment data collection equipment, e.g., bed load and suspended samplers, will be purchased by COE and training in use of this equipment will be provided by COE;

6. NBA will provide personnel to accompany COE, or COE contractor personnel, on the first contact into each of the member countries where data collection will be required;

7. access to the NBA library, the water resources libraries and data of the member nations will be provided. Information acquired by COE personnel and/or COE contractors will be allowed to be transferred to the U.S. for incorporation into the data storage and retrieval system and eventually the water/sediment model;

8. use of radio frequencies for use of short-range radio sets for communications between field parties will be negotiated with the member nations; and

9. the NBA will take necessary steps to obtain from FAC, or other French organizations, data which are presently stored in France. COE proposal is based on such data being available not more than sixty days after a request is made to the NBA. Any time longer than 60 days will extend the schedule of those tasks which data are required.

The Table of Organization of NBA is shown below.

B. U.S. Army Corps of Engineers (COE)

The U.S. Army Corps of Engineers, under a Participating Agency Services Agreement with AID, will provide technical assistance services to the Project including the in-service training of participating member country personnel. Overall management of the program will be accomplished utilizing project managers at each major location (Niger and Vicksburg). Management of the program will be directly assigned to Engineering Division of the Vicksburg District, Corps of Engineers. Management control methods will include monthly review of accomplishments, quarterly reports to the sponsor and development of a critical path diagram for the work effort. This critical path document will be furnished to the sponsor and modified if necessary. Management will include maintenance of necessary contacts with UNDP, USAID, NBA, and other organizations and nations.

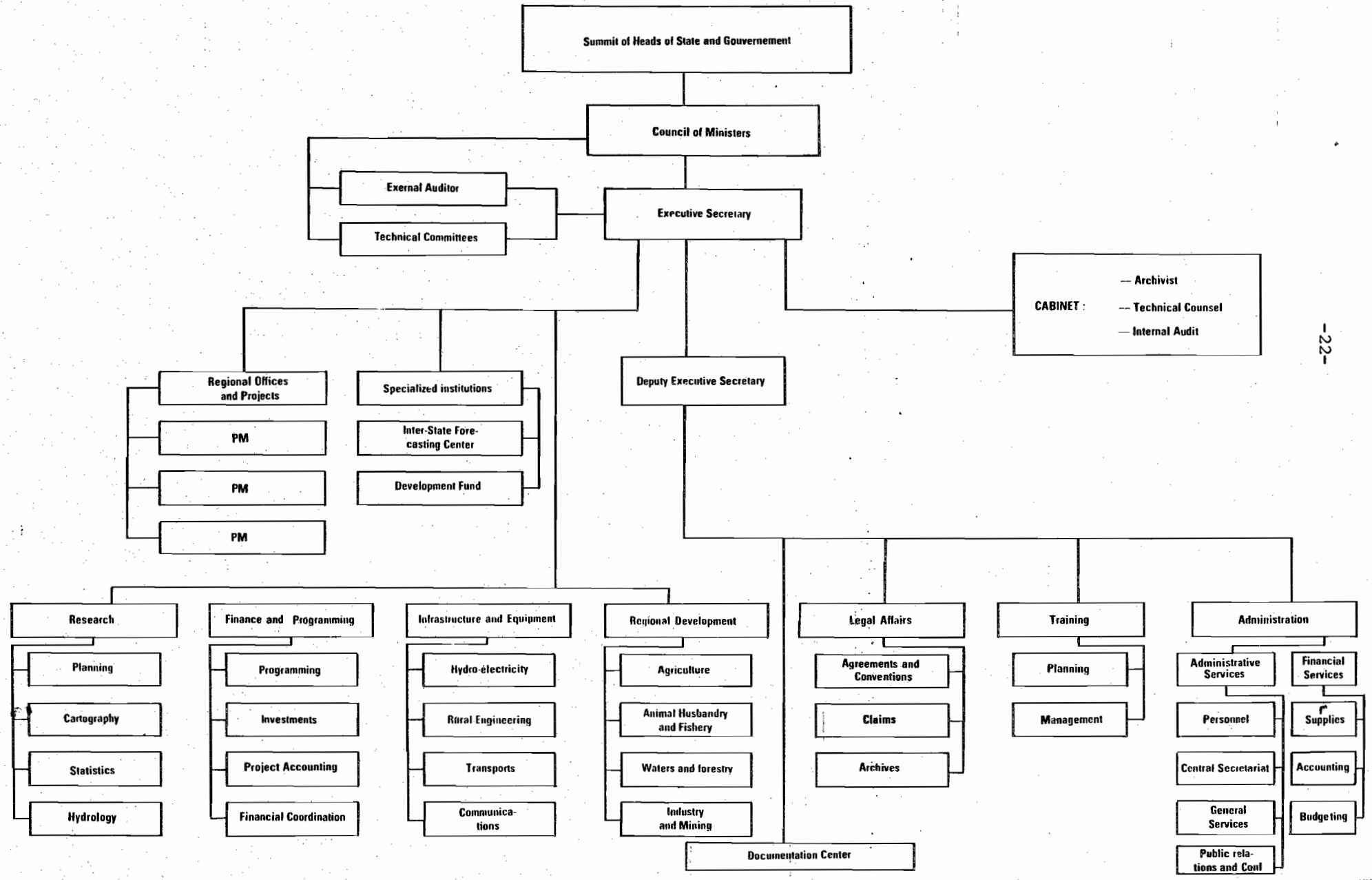
The team composition of Niger work will be as follows:

GS-14 Hydraulic or Civil Engineer

GS-13 Hydraulic or Civil Engineer

In addition to the above listed individuals, TDY personnel will be utilized for tours up to 90 days in various specialties including, but not limited to, structural engineering, river mechanics, hydraulic engineering, and soils engineering. This team composition is based on the ability to satellite the team to the U.S. Embassy in Niger and to receive some administrative and logistical support.

NIGER BASIN AUTHORITY
ORGANIGRAMME



The COE will gather and analyze data and provide in-service training to personnel of the hydrological services of the member states. The COE will have administrative jurisdiction over the technical aspects of its field assignment.

Team composition for the backup organization in Vicksburg will include the following:

GS-13/14	Interdisciplinary
GS-13	Hydraulics Engineer
GS-12	Hydraulics Engineer
GS-12	Civil Engineer

While only a small number of personnel will be directly assigned to the project, the varied and comprehensive assets of the District organization in engineering, non-engineering, and support areas will be utilized when required for this work effort.

Major portions of the work under this proposal will be accompanied by Architect-Engineer contracts to be selected by Corps of Engineers selection procedures. This selective procedure will include separate preselection, selection, and negotiation teams to assure that a competent engineering organization is selected for the work. Items which may be contracted are as follows:

Initial data collection
River sections
Geomorphology
Model development

The basic management of the contracts will be by the Vicksburg backup team. During project implementation, any contract changes suggested by the sponsor will be negotiated on a case-by-case basis.

The COE will procure stream sediment gauging and other data collection equipment and vehicles.

C. USAID/Niger

1. Provide administrative support for personnel matters;

2. international travel arrangements can be provided through AID-supported JAO, procurement assistance through USAID project management support unit (PMSU);

3. use of air pouch by the COE within limits applicable at this post;

4. telex facilities for U.S. personnel matters will be provided;

5. administrative support (typing, travel and transportation support, use of copier, assistance in procurement, etc.);

6. diplomatic passports for COE employees who travel frequently among member nations;

7. housing for two COE personnel in Niamey of the same quality as USAID personnel;

8. maintenance for two vehicles;

9. gas coupons for COE vehicles; and

10. office space and furniture for two employees stationed in Niamey and for two TDY employees will be provided at no cost. Office space and furnishing will be comparable to that furnished USAID personnel of equivalent grade.

D. USAIDs in other Member Countries

1. USAIDs will offer COE employees the same benefits and protection affored to Embassy employees in the individual nations where work will be conducted.

E. Member Countries of NBA

1. Provide visas, work permits, entry permits and other documentation necessary to facilitate the work of the COE within the territorial boundaries of the member state;

2. provide housing as required, for COE personnel;

3. provide office space and furniture as required for COE work;

4. furnish qualified technicians to work with COE -- to assist and to obtain in-service training. Salaries of these technicians will be paid by the member states;

5. provide secretarial service; and

6. furnish transportation for field work.

F. COE

Basic general coordination will be through the NBA. Contacts with other nations, donors, or organizations will be arranged by the NBA. The

program management for this proposal includes assets to allow overall coordination of this work effort with other basin development work underway on the Niger River. As a part of this effort, the Program Managers will recommend to the NBA those linkages with other organizations necessary to result in a more viable end product.

Specific linkages which are estimated to accomplish work items in the proposal will be from COE through USAID Mission/Niamey, to the NBA. Requests for changes or modifications to the work will be from the NBA through USAID/Niger, to the COE. These linkages are not intended to preclude day-to-day coordination of the proposed work but do specify the means in which any changes in the work effort will be accomplished. Conflicts will be resolved at the lowest possible level and will be referred to higher authority only after exhaustive efforts fail.

AID Capabilities

AID has been requested by the NBA to provide technical assistance to the NBA. This request was based upon known U.S. competence in river basin planning and development. In response, AID and the COE have participated in exploratory meetings with the NBA and the French to determine the most beneficial assistance within AID funding limitations. This is consistent with AID's policy to function within a multi-donor context.

UNITED STATES GOVERNMENT

memorandum

DATE: July 31, 1981

REPLY TO ATTN OF: AFR/DR/SWAP, Michael G. Huffman

SUBJECT: Niger River Development Planning (625-0915) Project Committee Meeting for PP Amendment

TO: AFR/DR/SWAP, Jonathan R. McCabe

A Project Committee Meeting was held July 23, 1981, to review the subject Project Paper Amendment.

The meeting was chaired by Mr. Michael Huffman, Project Officer for the subject regional project. Other Project Committee members in attendance were:

Dayton Maxwell, AFR/SWA/SRD
Michael Gould, AFR/DR/ENG
Jim Hester, AFR/DR/SDP

Invited, but not represented were Carole Scherrer, AFR/DR/ARD and Lisa DeSoto, GC/AFR.

The following points were discussed at the Project Meeting and are brought to your attention as possible points for discussion at the upcoming Review of the Project Paper Amendment which is recommended for approval by the Acting Assistant Administrator for Africa.

1. What will be Nigeria's role in the project?

2. How will the Niger Basin Authoirty (NBA) interface with the Kandaji Dam Project?

3. What is the Corps of Engineers' (COE) role vis-a-vis the NBA? Is the COE just to deliver a product, or might they also consider providing advisors to the NBA in the future?

4. What is the extent of AID's responsibility to take steps necessary to insure that adequate companion studies to the COE study are carried out (i.e., socio/economic, agricultural, environmental and health studies)?

Since the meeting, Dayton Maxwell, AFR/SWA/SRD has attended a Donors' Conference for the NBA; and, from what transpired at the conference, Dayton may be able to address these discussion points more fully than was possible during the Project Committee meeting.

OPTIONAL FORM NO. 10
(REV. 1-80)
GSA FPMR (41 CFR) 101-11.6
5010-114

☆U.S. Government Printing Office: 1990—341-526/6193

The Committee unanimously agreed that the Amendment should go forward for Review. The Review has been scheduled for Friday, August 7 at 10:30 am in room 2722-B and will be chaired by you.

UNITED STATES GOVERNMENT

memorandum

DATE: August 11, 1981 J.R. McCabe (for)

REPLY TO ATTN OF: AFR/DR/SWAP, Jonathan R. McCabe

SUBJECT: Niger River Development Planning (625-0915) Project Review Meeting for PP Amendment

TO: AAA/AFR/DR, John W. Koehring

The subject Review was held from 10:30 a.m. to 12:15 p.m. on , 1981.

The meeting was chaired by AFR/DR/SWAP, Jonathan R. McCabe. ct was presented by AFR/DR/SWAP, Michael Huffman and AFR/SWA/SRD Maxwell. Others in attendance were:

AFR/DR/ARD, C. Scherrer
AFR/DR/ARD, D. Schaer
AFR/DR/ENGR, M. Gould
AFR/DR/ENGR, T. Tummarello
AFR/DR/SDP, J. Hester
AFR/DP, R. Hynes
PPC/PDPR/HR, A. Morton
NBA, L. Fournier
NBA, D. Traore
COE, N. Bosco
COE, W. Johnson

Invited, but not represented were GC/AFR, AFR/CWA, AFR/SWA and CA.

The Project Review concluded that there are no outstanding iss and with some minor modifications to the Project Paper Amendment, Review recommends that the Amendment be referred to ECPR.

Recommendation: That you agree with the Project Review and appve referral of the Project Paper Amendment to ECPR (next schedu ECPR date is August 19).

APPROVED J.W. Koehring

DISAPPROVED _____

DATE AUG 12 1981

Clearances:
AFR/DR:LHeilman (in Wash)
AFR/DR:NCohen

Buy U.S. Savings Bonds Regularly on the Payroll Savings Plan

OPTIONAL FORM (REV. 7-76)
GSA FPMR (41 CFR 5010-112